

REMARKS/ARGUMENTS

Claims 23 and 24 have been amended, inserting 'isolated' to modify 'nucleic acid', as suggested by the Examiner. Thus, applicants request the Examiner withdraw §101 rejection on the two claims.

The Examiner rejected claims 6, 7, 9, 15-17 and 20 under 35 U.S.C. §103(a) over U.S. 5,618,699 and WO 96/21018. The Examiner stated:

U.S. 5,618,699 teaches the use of fusion proteins in plants, especially the process whereby a coat protein gene and a foreign gene are directly joined so as to produce a fused protein (U.S. 5,618,699 column 1 lines 19-24). U.S. 5,618,699 further teaches that when the virus coat protein is produced from the virus, the plants produce large quantities of the coat protein (column 1, lines 15-18). U.S. 5,618,699 further suggests that viruses of the cucumber mosaic viruses are especially useful in their invention (column 2, lines 49-58) (claim 6). U.S. 5,618,699 teaches the fused protein wherein the foreign gene promoter product is joined to the C-terminal of the coat protein (column 2, lines 44-4).

Office Action dated December 29, 2004 ("Office Action"), pages 3-4.

Additionally, the Examiner asserted:

WO 96/21018 teaches the protein of SEQ ID NO: 4 as the N-terminal sequence of a longer protein (218 amino acids) (see Sequence polypeptide search results result 6, date 6 December 2004). SEQ ID NO: 4 is the N-terminal region of cucumber mosaic virus, this is the N-terminal of the cucumber mosaic virus coat protein.

Appl. No. 09/857,841
Amendment dated March 29, 2005
Reply to Office Action of December 29, 2004

Office Action, page 4. The Examiner contends that those facts establish a *prima facie* case of obviousness. Applicants respectfully disagree.

The mere fact that 'a polypeptide of 218 amino acids expressed in a large quantity in plant can be used to produce a large quantity of a fusion polypeptide of the 218 amino acid polypeptide and another polypeptide of interest in plant' does not make one reasonably expect that 'the 14 amino acid N-terminal fragment of the polypeptide of 218 amino acids can also be successfully used for the same purpose.' There must be a teaching or suggestion that makes one expect that the specific '14 amino acid N-terminal fragment of the polypeptide of 218 amino acids' will work. The instant application's teaching that the specific 14 amino acid N-terminal fragment of the polypeptide of 218 amino acids can be used as a fusion partner to produce a fusion protein in plant must not be used as a teaching or suggestion. Such use of the present application's teachings would result in impermissible hindsight.

Without more, the simple teaching that the 218 amino acid polypeptide, whose part is lacking or replaced (see U.S. 5,618,699) can be used to produce a fusion protein in plant, cannot teach or suggest one skilled in the art to pick the specific '14 amino acid N-terminal fragment of the polypeptide of 218 amino acids (SEQ ID NO:4)' among the almost innumerable possible fragments with a reasonable expectation of success. Thus, applicants submit that the Examiner's instant §103 rejection is improper, and respectfully request that it be withdrawn.

The Examiner rejected claims 6-9, 10-18 and 20 under 35 U.S.C. §103(a) over U.S. 5,618,699, WO 96/21018 and U.S. 6,127,601. In this specific rejection, the Examiner asserted that U.S. 6,127,601 teaches a nucleic acid sequence 100% identical to bases 6-47 of SEQ ID NO: 3. Applicants respectfully disagree.

Appl. No. 09/857,841
Amendment dated March 29, 2005
Reply to Office Action of December 29, 2004

Figure 3 of U.S. 6,127,601 discloses a polynucleotide of 771 bases encoding a polypeptide of 218 amino acids. SEQ ID NO: 3 is a polynucleotide of 53 bases encoding the 14 amino acid N-terminal fragment of the 218 amino acid polypeptide. Therefore, applicants submit that the instant §103 rejection is improper for the same reason detailed above for the §103 rejection on claims 6, 7, 9, 15-17 and 20, and respectfully request that this second §103 rejection also be withdrawn.

In light of the foregoing amendments and remarks, applicants believe that all outstanding rejections are overcome, and submit that the present application is now in condition for allowance. Reconsideration and favorable action are earnestly requested.

Respectfully submitted,

By


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